DUPLICATE ORIGINAL

INTERNATIONAL BOUNDARY AND WATER COMMISSION
UNITED STATES AND MEXICO

Cd. Juárez, Chih.
November 28, 2000

JOINT REPORT OF THE PRINCIPAL ENGINEERS CONCERNING THE DEMARCATION AND MONUMENTATION OF THE INTERNATIONAL BOUNDARY ON THE BRIDGES OVER THE RIO GRANDE BETWEEN EAGLE PASS, TEXAS – PIEDRAS NEGRAS, COAHUILA II; LAREDO, TEXAS – COLOMBIA, NUEVO LEON; LAREDO, TEXAS IV– NUEVO LAREDO, TAMAULIPAS III; PHARR, TEXAS – REYNOSA, TAMAULIPAS; LOS INDIOS, TEXAS – LUCIO BLANCO, TAMAULIPAS; AND VETERANS, BROWNSVILLE, TEXAS – MATAMOROS, TAMAULIPAS III

To the Honorable Commissioners
International Boundary and Water Commission
United States and Mexico
El Paso, Texas and Ciudad Juárez, Chihuahua

Sirs:

Pursuant to your instructions, we respectfully submit for your consideration this Joint Report concerning the demarcation and monumentation of the international boundary at the sites of bridges constructed over the Rio Grande at Eagle Pass, Texas – Piedras Negras, Coahuila II; Laredo, Texas – Colombia, Nuevo Leon; Laredo, Texas IV – Nuevo Laredo, Tamaulipas III; Pharr, Texas – Reynosa, Tamaulipas; Los Indios, Texas – Lucio Blanco, Tamaulipas; and Veterans, Brownsville, Texas – Matamoros, Tamaulipas.

In furtherance of Article II, paragraphs A and B of the "Treaty between the United States and Mexico to Resolve Pending Boundary Differences and Maintain the Rio Grande and Colorado River as the International Boundary," dated November 23, 1970, we determined the location of the international boundary in the middle of the channel of the river occupied by the normal flow at the referenced sites. The physical demarcation of the international boundary was performed by the placement of monuments, consisting of bronze plaques, in the dimensions and with the inscriptions shown at Exhibit A.

Eagle Pass, Texas – Piedras Negras, Coahuila II

The normal flow of the Rio Grande at this location is 2,030 cubic feet per second (cfs) or 57.5 cubic meters per second (cms) at a water surface elevation of 684.1 feet (ft.) msl or 208.5 meters (m) mean sea level (msl). Exhibit 1 demonstrates the cross section of the channel of the Rio Grande at the site where the bridge is located, showing: 1) the surface water level for a flow of 2,030 cfs (57.5 cms); 2) the center of the channel corresponding to the normal flow; and 3) the position of the monuments relative to the bridge bents. Consistent with Article VII of the 1970 Boundary Treaty, two

monuments were placed on the upstream and downstream sides of the bridge, exactly on the international boundary, at Station No. 11+48.30 ft. (0+350.00 m), 32.48 ft. (9.9 m) from the center of Bent No. 4 toward the United States abutment. Alternating yellow and white diagonal stripes were painted on the pavement converging at the international boundary between the monuments.

Laredo, Texas – Colombia, Nuevo Leon

The normal flow of the Rio Grande at this location is 2,458 cfs or 69.6 cms at a water surface elevation of 409.25 ft. (124.74 m) msl. Exhibit 2 demonstrates the cross section of the channel of the Rio Grande at the site where the bridge is located, showing: 1) the surface water level for a flow of 2,458 cfs (69.6 cms); 2) the center of the channel corresponding to the normal flow; and 3) the position of the monuments relative to the bridge bents. Consistent with Article VII of the 1970 Boundary Treaty, monuments were placed on the upstream and downstream sides of the bridge exactly on the international boundary at Station No. 340+45.05 ft. (10+376.93 m), 57.41 ft. (17.5 m) from the center of Bent No. 6 towards the United States abutment. Alternating yellow and white diagonal stripes were painted on the pavement converging at the international boundary between the monuments.

Laredo, Texas IV – Nuevo Laredo, Tamaulipas III

The normal flow of the Rio Grande at this location is 2,420 cfs (68.5 cms) at a water surface elevation of 366.59 ft. (111.74 m) msl. Exhibit 3 demonstrates the cross section of the channel of the Rio Grande at the site where the bridge is located, showing 1) the surface water level for a flow of 2,420 cfs (68.5 cms); 2) the center of the channel corresponding to the normal flow; and 3) the position of the monuments relative to the bridge bents. Consistent with Article VII of the 1970 Boundary Treaty, monuments were placed on the upstream and downstream sides of the bridge exactly on the international boundary, at Station No. 32+27.78 ft. (0+983.83 m), 18.40 ft. (5.6 m) from the center of Bent No. 6 towards the U.S. abutment. Alternating yellow and white diagonal stripes were painted on the pavement converging at the international boundary between the monuments.

Pharr, Texas – Reynosa, Tamaulipas

The normal flow of the Rio Grande at this location is 1,140 cfs (32.3 cms) at a water surface elevation of 70.5 ft. (21.50 m) msl. Exhibit 4 demonstrates the cross section of the channel of the Rio Grande at the site where the bridge is located, showing: 1) the surface water level for a flow of 1,140 cfs (32.3 cms); 2) the center of the channel corresponding to the normal flow; and, 3) the position of the monuments relative to the bridge bents. Consistent with Article VII of the 1970 Boundary Treaty, and due to the bridge axis being skewed in relation to the international boundary, the upstream monument was placed exactly on the international boundary at Station No. 100+22.25 ft. (3+054.78 m), 61.50 ft. (18.74 m) from the bridge centerline station at Bent No. 105 towards the United States abutment. The downstream monument was placed at bridge centerline Station No. 99+90.81 ft. (3+045.20 m), 61.50 ft. (18.74 m) from the bridge centerline station at Bent No. 105 towards the United States abutment. Alternating yellow and white diagonal stripes were painted on the pavement converging at the international boundary between the monuments.

Los Indios, Texas – Lucio Blanco, Tamaulipas

The normal flow of the Rio Grande at this location is 358 cfs (10.15 cms) at a water surface elevation of 38.10 ft. (11.60 m) msl. Exhibit 5 demonstrates the cross section of the channel of the Rio Grande at the site where the bridge is located, showing: 1) the surface water level for a flow of 358 cfs (10.15 cms); 2) the center of the channel corresponding to the normal flow; and, 3) the position of the monuments relative to the bridge bents. Consistent with Article VII of the 1970 Boundary Treaty, monuments were placed on the upstream and downstream sides of the bridge, exactly on the international boundary, at Station No. 144+49.80 ft. (4+404.30 m), 46.06 ft. (14.04 m) from the center of Bent No. 3 towards the United States abutment. Alternating yellow and white diagonal stripes were painted on the pavement converging at the international boundary between the monuments.

Veterans Bridge, Brownsville, Texas – Matamoros, Tamaulipas III

The normal flow of the Rio Grande at this location is 215.4 cfs (6.1 cms) at a water surface elevation of 6.89 ft. (2.10 m) msl. Exhibit 6 demonstrates the cross section of the channel of the Rio Grande at the site where the bridge is located, showing: 1) the surface water level for a flow of 215.4 cfs (6.1 cms); 2) the center of the channel corresponding to the normal flow; and, 3) the position of the monuments relative to the bridge bents. Consistent with Article VII of the 1970 Boundary Treaty, and due to the bridge axis being skewed in relation to the international boundary, a monument was placed on the upstream side of the bridge at Station No. 48+00.10 ft. (1+463.07 m), 55.48 ft. (16.85 m) from the bridge centerline station at Bent No. 19 towards the United States abutment, and another one was placed on the downstream side at Station No. 47+36.78 ft. (1+443.77 m) 55.48 ft (16.85 m) from the bridge centerline station at Bent No. 19 towards the United States abutment. Alternating yellow and white diagonal stripes were painted on the pavement converging at the international boundary between the monuments.

Recommendation

Since the work was performed under the supervision of the Commission, and is in accordance with the present Joint Report, we respectfully recommend the adoption of the location of the international boundary on the referenced bridges, as described herein.

Respectfully submitted,

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